

## Burnout Among Primary School Teachers in the Wazzane Region in Morocco: Prevalence and Risk Factors

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### ABSTRACT

*Introduction: Burnout is a real malaise that affects the mental health of teachers. The objective is to determine the prevalence of burnout among primary school teachers in the Wazzane region and to look for associated risk factors. Methods: Descriptive cross-sectional study conducted in 2017- 2018 with a sample of 330 teachers. Socio-demographic and work-related data were assessed by a self-administered questionnaire and the Karasek Job Content Questionnaire (JCQ) the Karasek, the burnout by the Maslach Burnout Inventory (MBI). Results: 330 teachers participated in the study with a male predominance of 62.4% and an average age of 38.4 (SD = 8.9). The average scores for emotional exhaustion, depersonalization and personal accomplishment were (21.8 ± 9.2); (14.1 ± 9.9) and (15.1 ± 8.4) respectively. Pathologically, emotional exhaustion was high in 23.9%, depersonalization was high in 24.2% and personal accomplishment was low in 26.1% of participants. 46.6% were victims of burnout, of which 23.9% had a low level; 14.2% had a moderate level and 8.5% had severe burnout. Logistic regression analysis showed that the predictors of burnout were female gender ( $p < 0.01$ ), Problems of equipment didactic ( $p < 0.01$ ), student demotivation ( $p < 0.05$ ), conflict with colleagues ( $p < 0.05$ ), work overload ( $p < 0.01$ ) and low decision-making autonomy ( $p < 0.01$ ). Conclusion: These results justify the interest of a prevention program and intervention at different levels to protect teachers.*

## 1. Introduction

Burnout is a negative psychic experience experienced by an individual; it is related to chronic emotional stress caused by working to help people [1]. Maslach and Jackson [2] identified three characteristics of the burnout syndrome:

**Emotional exhaustion:** It refers to the feeling of being drained of one's emotional and physical resources and leads to difficulties in regarding to the emotions of the other. It represents the basic response to stress.

**Depersonalization:** It represents a negative or excessively detached response towards other people who are considered as objects.

**Loss of personal accomplishment:** It refers to feelings of incompetence and inefficiency, lack of success and productivity at work.

Teachers are part of at-risk populations of workers who may be exposed to the burnout syndrome [3]. Indeed, Maslach and Travers have identified several socio-demographic and occupational risk factors for teacher burnout [4, 5]. In our context, no study has been carried out among primary school teachers. For this reason, we aim to determine the prevalence and risk factors of burnout among a population of primary school teachers in the Wazzane district (Morocco).

## 2. Methods

This cross-sectional study lasted six months, from December 2017 to June 2018. It concerned teachers working in public primary schools in the region of Wazzane in North-West of Morocco. Socio-demographic and work-related data were evaluated by a self-administered questionnaire and by the 29-item Karasek Job Content Questionnaire (JCQ) [6], which measures three different scales: Work overload with 9 items: 10, 11, 12, 13, 14, 15, 16, 17 and 18. Decision latitude with 9 items, subdivided into two sub-scales: the use of skills or qualifications with 6 items:

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1, 2, 3, 4, 5, 6 and decision-making autonomy with 3 items: 7, 8, 9. Social support with 11 items, 6 items for support from colleagues : 19, 20, 21, 22, 23, 24 and 5 items for hierarchical support: 25, 26, 27, 28, and 29. The Maslach Burnout Inventory MBI to 22 items that explore three scales has evaluated burnout [7]: Emotional exhaustion assessed by items 1,2,3,6,8,13,14,16,20; Depersonalization assessed by items 5,10,11,15,22; and loss of personal accomplishment assessed by items 4,7,9,12,17,18,19 and 21. These two questionnaires were validated and adapted to the context of Moroccan teachers.

For burnout, a score was calculated and a severity rating (low, moderate, and high) was assigned for each dimension. Emotional exhaustion was considered pathological for a score above 29, depersonalization for a score above 22, and personal accomplishment was considered low for a score below 11. The number of dimensions affected characterizes the degree of severity of burnout, so a single affected dimension determines low burnout, two affected dimensions determine moderate burnout, and three affected dimensions determine severe burnout (high emotional exhaustion and depersonalization scores, low personal accomplishment score). Statistical analysis was realized using SPSS version 21. Frequencies and percentages were calculated for the categorical variables, and the chi-square test ( $\chi^2$ ) was used to evaluate the differences between these variables. Continuous numerical data were summarized as mean and standard deviation. Logistic regression was used to determine the predictors of burnout; a p-value < 0.05 was considered statistically significant.

### 3. Results

For the 330 participants who completed the data sheet, the average age was 38.4±8.9 years, with a minimum age of 24 and a maximum age of 59. The sex ratio was 1.7 in favor of males. The average years of service was 16.3±8.9 years. 46.7% are between the ages of 35 and 49; 62.4% are male; 52.4% are married and 48.5% have years of service between 11 and 24.

In terms of work-related characteristics, 40% managed multigrade classes; 61.5% had problems due to student demotivation; 54.5% had problems due to equipment didactic; 19.1% reported conflicts with colleagues; 12.4% with administration; workload was high for 57.5%; decision-making autonomy was low for 42.7%, and social support was low for 45.2% of participants (Table 1).

Table 1: Sociodemographic and work-related characteristics of primary school teachers (n = 330) in Wazzane, 2017/2018.

Variable	Number	Percentage
<b>Age</b>		
24-34	125	37.9%
35-49	154	46.7%
≥ 50	51	15.4%
<b>Sex</b>		
Male	206	62.4%
female	124	37.6%
<b>Marital status</b>		
Married	173	52.4%

Unmarried	157	47.6%
<b>Years of service</b>		
1-10	107	32.4%
11-24	162	49.1%
≥25	61	18.5%
<b>Multigrade classes</b>		
Yes	132	40%
No	198	60%
<b>student demotivation</b>		
Yes	163	49.4%
No	167	50.6%
<b>Problems of equipment didactic</b>		
Yes	180	54.5%
No	150	45.5%
<b>Conflicts with colleagues</b>		
Yes	63	19.1%
No	267	80.9%
<b>Conflicts with administration</b>		
Yes	41	12.4%
No	289	87.6%
<b>Workload</b>		
High	187	57.5%
Low	138	42.5%
<b>Decision-making autonomy</b>		
Low	141	42.7%
High	189	57.3%
<b>Social support</b>		
Low	149	45.2%
High	181	57.3%

For the three dimensions of the burnout syndrome (emotional exhaustion, depersonalization and personal accomplishment), the average scores were respectively 21.8±9.1; 14.1±9.9 and 15.1±8.4.

Pathologically, emotional exhaustion was high for 23.9%; depersonalization was high for 24.2% and personal accomplishment was low for 27.6% of participants (table 2).

Similarly, the Maslach Burnout Inventory revealed that 154 teachers (46.6%) were victims of burnout, which 79 (23.9%) had a low level; 47 (14.2%) had a moderate level and 28 (8.5%) had a severe burnout (Figure 1).

Regarding sociodemographic risk factors, the chi-square test showed that age and years of service were not significantly associated with burnout, while gender was found to be significantly associated with burnout (p<0.01). Marital status was also significantly associated with burnout: married were more burned out than unmarried (p<0.001) (Table 3).

Table 2: Means, standard deviations and prevalence of the three dimensions of Burnout among primary school teachers (n=330) in Wazzane, 2017/2018.

Variable	Mean	Standard- Deviation	Pathological cases	Prevalence
<b>Emotional exhaustion</b>	21.8	9.1	79	23.9%
<b>Depersonalization</b>	14.1	9.9	80	24.2%
<b>Personal accomplishment</b>	15.1	8.4	91	27.6%

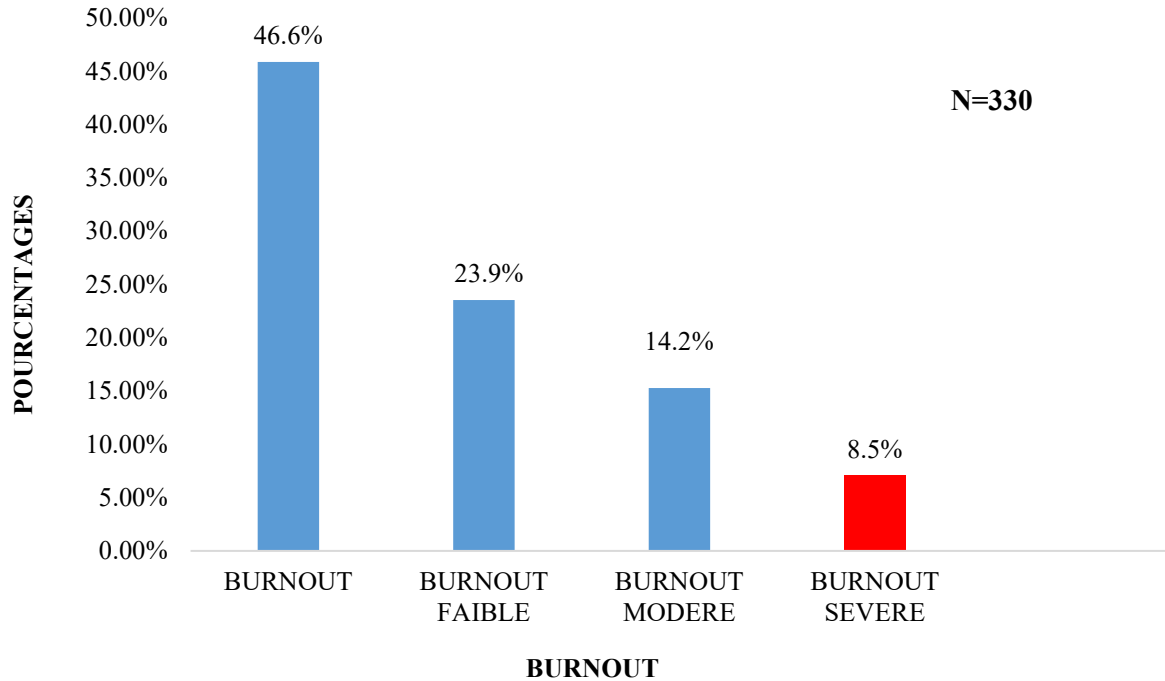


Figure 1: Profile of burnout syndrome among primary school teachers (n = 330) in Wazzane, 2017/2018.

Table 3: Association of burnout with sociodemographic risk factors among primary school teachers (n = 330) in Wazzane, 2017/2018.

Variable	Burnout		No burnout		Chi-square	p-value
	Number	%	Number	%		
<b>Age</b>					0.56	n .s
24-34	57	37.0%	68	38.6%		
35-49	75	48.7%	79	44.9%		
≥ 50	22	14.3%	29	16.5%		
<b>Sex</b>					17.06	<0.001
Male	78	50.6%	128	72.7%		
female	76	49.4%	48	27.3%		
<b>Marital status</b>					20.05	<0.001
Married	101	65.6%	72	40.9%		
Unmarried	53	34.4%	104	59.1%		
<b>Years of service</b>					0.36	n .s
1-10	51	33.1%	56	31.8%		
11-24	73	47.4%	89	50.6%		
≥25	30	19.5%	31	17.6%		

For work-related risk factors, the chi square test showed that burnout was significantly related to the management multigrade classes ( $p < 0.001$ ), the student demotivation ( $p < 0.001$ ), the problems of equipment didactic ( $p < 0.01$ ), the conflicts with colleagues ( $p < 0.001$ ), the conflicts with administration ( $p < 0.01$ ), the work overload ( $p < 0.01$ ), the low decision-making autonomy ( $p < 0.001$ ) and the low social support ( $p < 0.01$ ) (Table 4).

Logistic regression analysis showed that gender was the only sociodemographic variable that predicted burnout; while the work-related variables that predicted it were:

Problems of equipment didactic, student demotivation, conflicts with colleagues, work overload and Low Decision-making autonomy (Table 5).

These results show the importance of knowing certain stress factors specific to the teaching profession. Thus, problems of didactic equipment, student demotivation, work overload and low decision-making autonomy are risk factors that threaten the psychological health of the Moroccan teacher.

Table 4: Association of burnout with work-related risk factors among primary school teachers (n = 330) in Wazzane, 2017/2018.

Variable	Burnout		No burnout		Chi-square	p-value
	Number	%	Number	%		
<b>multigrade classes</b>						
Yes	80	51.9%	52	29.5%	17.18	<0.001
No	74	48.1%	124	70.5%		
<b>student demotivation</b>						
Yes	95	61.7%	68	38.6%	17.46	<0.001
No	59	38.3%	108	61.4%		
<b>Problems of equipment didactic</b>						
Yes	106	68.8%	74	42.0%	23.76	<0.001
No	48	31.2%	102	58.2%		
<b>conflicts with colleagues</b>						
Yes	44	28.6%	19	10.8%	16.80	<0.001
No	110	71.4%	157	89.2%		
<b>Conflicts with administration</b>						
Yes	28	18.2%	13	7.4%	8.79	<0.01
No	126	81.8%	163	92.6%		
<b>workload</b>						
High	103	66.9%	89	50.6%	8.99	<0.01
Low	51	33.1%	87	49.4%		
<b>Decision-making autonomy</b>						
Low	82	53.2%	59	33.5%	13.05	<0.001
High	72	46.8%	117	66.5%		
<b>Social support</b>						
Low	83	53.9%	66	37.5%	8.91	<0.01
High	71	46.1%	110	62.5%		

Table 5: Logistic regression analysis of independent predictors of burnout among primary school teachers (n=330) in Wazzane, 2017/2018

Variable	B	p-value	OR	95%CI	
Sex (female)	-0,743	0,004	0,476	0,286	0,791
Problems of equipment didactic	0,774	0,003	2,169	1,302	3,615
Student demotivation	-0,59	0,032	0,554	0,324	0,95

<b>Conflicts with colleagues</b>	0,733	0,029	2,081	1,079	4,015
<b>Work overload</b>	0,718	0,005	2,05	1,24	3,389
<b>Low decision-making autonomy</b>	-0,787	0,003	0,455	0,272	0,764

OR: Odds-Ratio; CI: Confidence Interval

These results show the importance of knowing certain stress factors specific to the teaching profession. Thus, problems of didactic equipment, student demotivation, work overload and low decision-making autonomy are risk factors that threaten the psychological health of the Moroccan teacher.

#### 4. Discussion

The objective of our study was to evaluate burnout and determine its prevalence and risk factors among a sample of Moroccan primary school teachers.

In Morocco, no study had yet been carried out among primary school teachers. Most of the studies on burnout concerned the health care professions. However, the teacher may also be exposed to this pathology, as confirmed by many of foreign studies [8, 9, 10]. The prevalence of burnout found in our study is 46.6%, which is higher than that found in the studies of some Arab countries, for example 21% in Tunisia [11], 24.5% in Iraq [12]. However, it remains lower than that found in a Moroccan study conducted among university teachers where it exceeds 60% [13] and that found in some Asian countries where it can reach 50 to 70% [5]. The difference in the prevalence of burnout between studies can be explained by variations in assessment tools and methods, socio-cultural factors, the timing of data collection and teachers' coping strategies to deal with stress. In this study, age and years of service were not associated with burnout, which is consistent with the study by Van Der Doef and Maes [14]. However, in a meta-analysis involving 5 to 35 studies and 1,092 to 10,818 subjects, the association between burnout and age, and burnout and experience was demonstrated, the older and more experienced subjects had lower burnout levels [15].

For gender, it was significantly related to burnout, and women were more exhausted than men, which is consistent with other studies that have reported that female teachers experienced burnout more than teachers [16,17], and a meta-analysis that looked at the effect of gender on burnout reported significantly higher overall burnout scores for women [18].

With regard to teacher burnout, the literature has clearly objectified the link between work-related risk factors and the development of burnout [5]. The main stressors described in the international literature include poor material conditions, work overload, organizational factors, but also administrative difficulties and role conflicts [9, 19, 20]. In our study, logistic regression revealed that the work-related risk factors that predict burnout were work overload ( $p < 0.01$ ); low decision-making autonomy ( $p < 0.01$ ); the Problems of equipment didactic ( $p < 0, 01$ ); work overload ( $p < 0.01$ ); student demotivation ( $p < 0.05$ ) and conflicts with colleagues ( $p < 0.05$ ).

For work overload and low decision-making autonomy, the results found are consistent with a study that looked at

associations between work demands (workload) and resources (autonomy, degree of control) and burnout. Positive correlations were found for work demands and negative correlations were found for perceived resources [21]. In the same vein, a meta-analysis of one hundred and seventy-nine articles, representing 186,440 topics treating the associations between burnout and perceived work demands and resources, showed that there are positive correlations with cognitive workload at work and negative correlations with the "Resources" category: autonomy, support from colleagues, knowledge, management style, and feeling of security [22]. For other work-related factors, our work revealed a significant link between burnout and the Problems of equipment didactic, which is consistent with several studies that have found that the material conditions of the school environment play a significant role in teacher distress and dissatisfaction [8, 23]. Addition, student demotivation also represents a risk factor for the development of burnout in this study, and the literature has widely reported the association of burnout with relationship problems with students. Thus, a study, which involved 2558 teachers in France, showed a significant association between difficulties with students and the three pathological dimensions of burnout [24].

#### 5. Conclusion

The Moroccan educational context is affected by a plethora of risk factors that can affect the psychological health of teachers. It is necessary to carry out serious studies on the quality of life at work, teacher satisfaction and psychological health in order to establish a prevention program at different levels and protect this true wealth of Morocco.

#### Conflict of Interest

The authors declare no conflict of interest.

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